

ABSTRACT OF THE DISCLOSURE

A network device includes a media access control (MAC) device that transmits a first data stream at a first data rate that includes symbols having M bits. A translator converts the first data stream to a second data stream at a second data rate. The translator includes a data appender that appends N bits to the symbols in the first data stream to generate second symbols having $M+N$ bits. A data duplicator duplicates the second symbols X times to produce the second data stream at the second data rate.